

What is claimed is:

1. A thin film deposition reactor comprising:

a reactor block having a deposition space;

a wafer block on which a wafer is mounted;

a top lid for covering and sealing the reactor block;

a showerhead disposed under the top lid, the showerhead for spraying a reaction gas on the wafer block; and

an exhaust line disposed in a lower portion of the reactor block, the exhaust line through which gases are exhausted from the reactor block,

wherein a lower pumping baffle and an upper pumping baffle are stacked on a bottom of the reactor block between an outer circumference of the wafer block and an inner circumference of the reactor block, a lower pumping region is formed between the lower pumping baffle and an inner sidewall of the reactor block, and an upper pumping region is formed between the upper pumping baffle and the inner sidewall of the reactor block,

wherein the deposition space is connected to the upper pumping region by a plurality of upper pumping holes formed in the upper pumping baffle,

wherein the upper pumping region is connected to the lower pumping region by a plurality of lower pumping holes formed in the lower pumping baffle,

and wherein the lower pumping region is connected to the exhaust line.

2. The reactor of claim 1, further comprising an over-pressurized gas inlet line disposed in a lower portion of the reactor block, the over-pressurized gas inlet line for allowing an inflow of an over-pressurized gas to prevent the reaction gas from flowing below the wafer block,

wherein a plurality of exhaust holes are formed in inner sidewalls of the lower pumping baffle and allow the over-pressurized gas to flow into the exhaust line.

3. The reactor of claim 1, wherein the lower pumping region is connected to the exhaust line by a single connection port formed in a bottom of the reactor block.

4. The reactor of claim 1, further comprising a cylindrical chamber insertion stacked on the upper pumping baffle and having a gate groove through

which a wafer is loaded and unloaded, the chamber insertion contacting the inner sidewall of the reactor block adjacent to an upper portion of the upper pumping baffle.